

<p>Montana Department of Natural Resources and Conservation Water Resources Division Water Rights Bureau</p>
<p>ENVIRONMENTAL ASSESSMENT For Routine Actions with Limited Environmental Impact</p>

Note: Instructions to DNRC staff for preparing this EA can be found at:
http://www.dnrc.state.mt.us/eis_ea.html

Part I. Proposed Action Description

1. *Applicant/Contact name and address:* IX RANCH CO
PO Box 489
Big Sandy, MT 59520

2. *Type of action:* Water Right Change Application No. 40H-30017203

3. *Water source name:* Big Sandy Creek

4. *Location affected by action:* Point of Diversion – NENWNW Sec. 3, T27N R13E,
Chouteau County

New pivot place of use: W2 Sec. 28, T28N R13E and
E2 Sec. 29, T28N R13E, Chouteau County

162 Acres previously flood irrigated in Sec. 19 and 20,
T28N R13E are proposed to be taken out of irrigation to
compensate for the new acres under the pivot.

5. *Narrative summary of the proposed project, purpose, action to be taken, and benefits:*
Applicant is proposing to install a 285 acre pivot in Sec. 28 & 29, T28N R13E. The application indicates the pivot will cover approximately 123 previously flood irrigated land and include 162 new acres. The historic point of diversion (headgate & ditch) and water source will remain the same. For the proposed 285 acre pivot, a new 2,150 gpm pump is intended to be placed in an existing pump manifold system off the ditch and the water will then be conveyed north to the pivot through 2100 feet of 15 inch mainline. The pump manifold system located in the NWSESW Sec. 28, T28N R13E, a secondary diversion, was placed in the ditch several years ago and has been used for an existing pivot located to the south of the new proposed pivot, more specifically located in the S2 Sec. 29 and N2 Sec. 32, T28N R13E. The applicant proposes to take 162 historically flood irrigated acres out of production in Sec. 19 and 20, T28N R13E, to compensate for the new acres to be irrigated under the pivot. Diversion has occurred historically from March 1 to September 30 and will not be changed.

The DNRC shall issue a water use authorization if an applicant proves the criteria in 85-2-402, MCA, are met.

6. *Agencies consulted during preparation of the Environmental Assessment:*
(include agencies with overlapping jurisdiction)
 Montana State Historic Preservation Office (SHPO)
 Montana Natural Heritage Program
 Dept. of Environmental Quality Website (TMDL 303D listing)
 Montana Fish, Wildlife & Parks, Montana Rivers Information System Website
 National Wetlands Inventory Website
 Chouteau County Natural Resources and Conservation Service – Chouteau County

Part II. Environmental Review

1. Environmental Impact Checklist:

PHYSICAL ENVIRONMENT

WATER QUANTITY, QUALITY AND DISTRIBUTION

Water quantity - *Assess whether the source of supply is identified as a chronically or periodically dewatered stream by DFWP. Assess whether the proposed use will worsen the already dewatered condition.*

Determination: The source of water for the existing right being changed is Big Sandy Creek. Big Sandy Creek is not listed as a chronically or periodically dewatered stream by the Dept. of Fish, Wildlife & Parks (DFWP). This project, filed on a change application, is to add a pivot to 12 existing water rights all historically diverting water from Big Sandy Creek. According to the application, the 285 acre pivot will cover 123 acres of historically flood irrigated land, will include 162 acres of new irrigation, and take 162 acres out of flood irrigation to swap for the new acres. The project should not affect water quantity and water availability on Big Sandy Creek because the primary headgate diversion is not being altered and the amount of water diverted at the ditch will not increase or exceed the amount historically used. Therefore, the stream flow condition should remain unchanged.

Water quality - *Assess whether the stream is listed as water quality impaired or threatened by DEQ, and whether the proposed project will affect water quality.*

Determination: Big Sandy Creek is identified as having one or more uses impaired and requiring a TMDL by DEQ on the 2002 303d list. Big Sandy Creek fully supports agriculture, industrial and warm water fishery uses but only partially supports aquatic life, and is not supporting for drinking water supply. Since no changes will be made to the primary diversion structure on Big Sandy Creek and no additional water will be taken from the source, there should be no water quality impacts to the source.

Groundwater - *Assess if the proposed project impacts ground water quality or supply. If this is a groundwater appropriation, assess if it could impact adjacent surface water flows.*

Determination: The change project should have no significant impact on groundwater in the area. As proposed, there will be no changes to the primary headgate diversion and no increase of flow rate and volume.

DIVERSION WORKS - *Assess whether the means of diversion, construction and operation of the appropriation works of the proposed project will impact any of the following: channel impacts, flow modifications, barriers, riparian areas, dams, well construction.*

Determination: No changes will be made to the existing headgate primary diversion structure on Big Sandy Creek located in NENWNW Sec. 3, T27N R13E so no impacts to the primary diversion works should occur. For the proposed 285 acre pivot, a secondary diversion, a 2,150 gpm pump, is intended to be placed in an existing pump manifold system off the ditch located in the NWSESW Sec. 28, T28N R13E. The water will then be conveyed north to the pivot through 2100 feet of 15 inch mainline.

UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES

Endangered and threatened species - *Assess whether the proposed project will impact any threatened or endangered fish, wildlife, plants or aquatic species or any "species of special concern," or create a barrier to the migration or movement of fish or wildlife. For groundwater, assess whether the proposed project, including impacts on adjacent surface flows, would impact any threatened or endangered species or "species of special concern."*

Determination: A research request form was sent to the Montana State Historic Preservation Office (SHPO). A report was received indicating there are three (3) species of concern near the project area, however, the information provided about the species identified only two. The species of concern is the Bobolink bird and the Black-tailed Prairie Dog. The map provided by SHPO indicates that the Black-tailed Prairie Dog is found near the site of the existing headgate diversion structure. Since there will be no changes to the existing headgate diversion, the project should have no impact on the prairie dog species. The Bobolink bird is found near the new pivot site. Since the new pivot is a low-pressure system, the bird should not be negatively impacted.

Wetlands - *Consult and assess whether the apparent wetland is a functional wetland (according to COE definitions), and whether the wetland resource would be impacted.*

Determination: No known wetlands exist in the project area.

Ponds - *For ponds, consult and assess whether existing wildlife, waterfowl, or fisheries resources would be impacted.*

Determination: There are no ponds associated with this application.

GEOLOGY/SOIL QUALITY, STABILITY AND MOISTURE - *Assess whether there will be degradation of soil quality, alteration of soil stability, or moisture content. Assess whether the soils are heavy in salts that could cause saline seep.*

Determination: According to the Chouteau County Soil Survey, the soils at the new place of use under the proposed pivot are primarily Evanston and Kremlin loam and clay loam soils, and Ethridge silty clay loam soils. These soils are considered to be deep well-drained soils and regarded to be prime farm land. In this change application, the applicant proposes to use sprinkler irrigation using a pivot. The soils will be temporarily disturbed when the pipeline and pivot is installed, however, disruption will be moderate and the area will likely be revegetated so impacts should be minor. With sprinkler irrigation, the applicant will be able to control the amount of water applied to the soil with minimal runoff and ponding. Irrigation enhances crop cover during the growing season and provides more protection from wind and water erosion. Irrigation also increases plant residues returned to the soil. Soil structure is improved, microbe populations benefit from the added food source, and nitrogen fertility is enhanced. It is further anticipated that by switching from flood to sprinkler, impacts to the soil will probably improve with proper management of the pivot system. Because a portion of the area under the pivot has been previously flood irrigated, the installation of the pivot should not cause further significant impact to the soils. There should be little impact to soil quality or alteration of soil stability from the construction of this project. Saline is not considered to be a problem in this area, and the project is not expected to cause any saline seep.

VEGETATION COVER, QUANTITY AND QUALITY/NOXIOUS WEEDS - *Assess impacts to existing vegetative cover. Assess whether the proposed project would result in the establishment or spread of noxious weeds.*

Determination: According to the change application, the new 285 acre pivot will cover about 123 historically flood irrigated acres plus about 162 new acres. The existing vegetative cover at the new place of use under the proposed pivot is currently strip farmed. It appears that all native vegetation was removed years ago and the land has been in agricultural production since. This proposed change should not result in establishment of noxious weeds since there will be minimal soil disturbance and the application of irrigation water will enhance existing conditions. There will be some disturbance to the vegetative cover during the construction phase of the pipeline and pivot. These impacts, however, should be minor. There is potential to establish or spread noxious weeds due to vegetation disturbance, however, it is the responsibility of the property owner to control weeds on their property.

AIR QUALITY - *Assess whether there will be a deterioration of air quality or adverse effects on vegetation due to increased air pollutants.*

Determination: The project could impact air quality due to the emissions from the proposed diesel-powered pump to be used. Air quality could diminish slightly due to the emissions, however, the proposed secondary pump site is located about 2 miles from a populated town so the impact should be minimal.

HISTORICAL AND ARCHEOLOGICAL SITES - *Assess whether there will be degradation of unique archeological or historical sites in the vicinity of the proposed project.*

Determination: A research request was sent to the Montana Historical Society. A response was received indicating there is low likelihood cultural properties will be impacted and a cultural resource inventory is unwarranted at this time. They further reported that should cultural materials be inadvertently discovered during the project, the Montana Historical Society should

be contacted and the site investigated. Since the project is located on private property, any cultural resource inventory would be conducted at the discretion of the property owner.

DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AND ENERGY - *Assess any other impacts on environmental resources of land, water and energy not already addressed.*

Determination: No additional impacts on other environmental resources were identified.

HUMAN ENVIRONMENT

LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS - *Assess whether the proposed project is inconsistent with any locally adopted environmental plans and goals.*

Determination: There are no known environmental plans or goals in this area.

ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES - *Assess whether the proposed project will impact access to or the quality of recreational and wilderness activities.*

Determination: The project is located on private land and would not likely impact recreational or wilderness activities.

HUMAN HEALTH - *Assess whether the proposed project impacts on human health.*

Determination: No potential impacts to human health were identified.

PRIVATE PROPERTY - *Assess whether there are any government regulatory impacts on private property rights.*

Yes ___ *No* X_. *If yes, analyze any alternatives considered that could reduce, minimize, or eliminate the regulation of private property rights.*

Determination: There are no known additional government regulatory impacts on private property rights associated with this application.

OTHER HUMAN ENVIRONMENTAL ISSUES - *For routine actions of limited environmental impact, the following may be addressed in a checklist fashion.*

Impacts on:

- (a) Cultural uniqueness and diversity ? No significant impact.
- (b) Local and state tax base and tax revenues ? No significant impact.
- (c) Existing land uses ? No significant impact.

- (d) Quantity and distribution of employment ? No significant impact.
- (e) Distribution and density of population and housing ? No significant impact.
- (f) Demands for government services ? No significant impact.
- (g) Industrial and commercial activity ? No significant impact.
- (h) Utilities ? No significant impact.
- (i) Transportation ? No significant impact.
- (j) Safety ? No significant impact.
- (k) Other appropriate social and economic circumstances ? No significant impact.

2. ***Secondary and cumulative impacts on the physical environment and human population:*** No secondary or cumulative impacts have been identified.
3. ***Describe any mitigation/stipulation measures:*** None at this time.
4. ***Description and analysis of reasonable alternatives to the proposed action, including the no action alternative, if an alternative is reasonably available and prudent to consider:***

No action alternative: This alternative is to do nothing and the existing water right claims would remain as is. The applicant would not have the benefit of more production as a result of switching from flood to sprinkler for their irrigation use.

Alternative 1: Approve the change application as submitted, perhaps with certain conditions imposed for authorization issuance.

PART III. Conclusion

1. ***Preferred Alternative:*** Alternative 1.

2. ***Comments and Responses:*** None

2. ***Finding:***

Yes___ No **X** Based on the significance criteria evaluated in this EA, is an EIS required?

If an EIS is not required, explain why the EA is the appropriate level of analysis for this proposed action: No significant impacts have been identified, therefore an EIS is not necessary

Name of person(s) responsible for preparation of EA:

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Title: Water Resources Specialist

Date: August 1, 2006